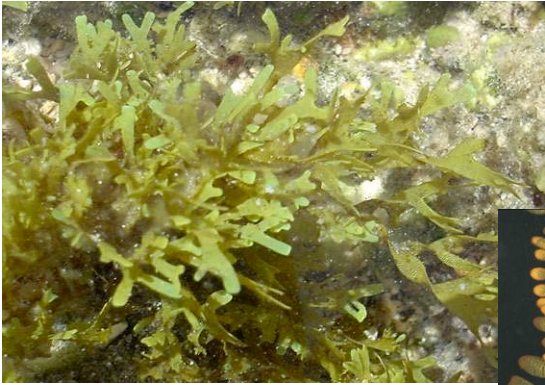
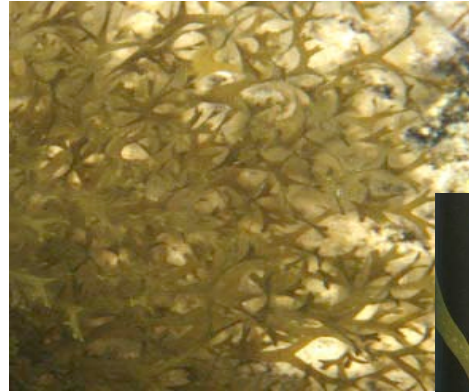
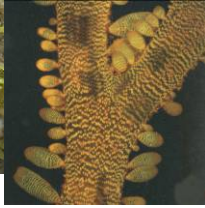


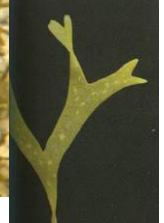
**Dictyota spp.** – flat, forked ends



**Dictyota sandvicensis**  
frilly sides, may have blue shimmer underwater



**Dictyota acutiloba** – branches spiral



**Sargassum spp.** – has “leaves”, NOT forked, scratchy, stiff



**S. aquifolium** – wide branches with spines



**S. polyphyllum** – thin wavy-edged branches, looks like fluffy tail



**S. obtusifolium** – long thin branches, smooth edges



**Dictyopteris spp.** – flat forked branches have “veins”

**D. australis** – top, “ $\wedge$ ” lines

**D. plagiogramma** – bottom, “ $\vee$ ” lines



**Chnoospora minima**  
branched, pits with hairs





***Padina spp.***



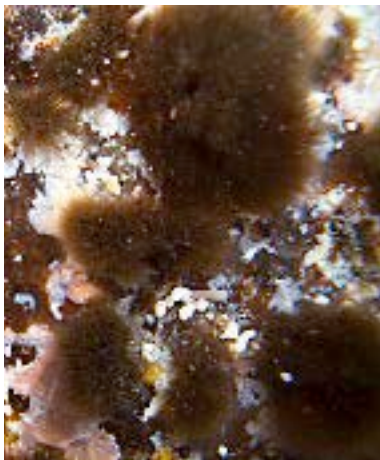
***Styopodium flabelliforme***  
shimmers blue underwater, often torn edges



***Colpomenia sinuosa*** – hollow



***Hydroclathrus clathratus*** – hollow with holes



***Sphacelaria spp.*** – dark brown tufts



***Turbinaria ornata***



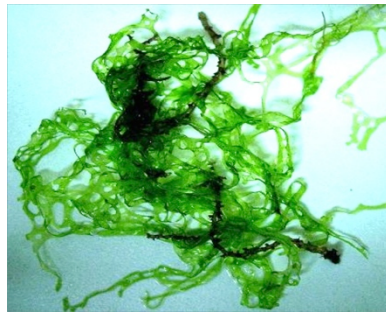
***Lobophora variegata***  
fan-shaped, grows close to ground



***Asteronema breviarticulatum***  
high intertidal, looks like dreadlocks



***Ulva spp.*** – thin green blade or tube



***Cladophoropsis/Cladophora spp.***  
tangled mat, grass-like, branched, firm or soft



***Chaetomorpha antennina***  
stacked cells, tufted, not branched,  
firm and flexible

***Cladophora spp.*** – branched green filament



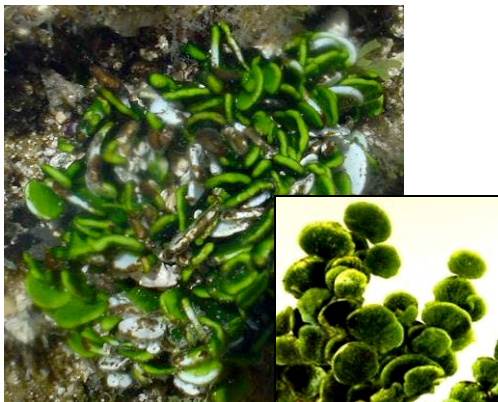
***C. sericea***



***C. vagabunda***



***Bryopsis spp.*** – bright green fine,  
feathery



***Halimeda discoidea***



***Neomeris spp.*** – 2-3 cm tall





***Avrainvillea amadelpha***  
fan-shaped, leathery



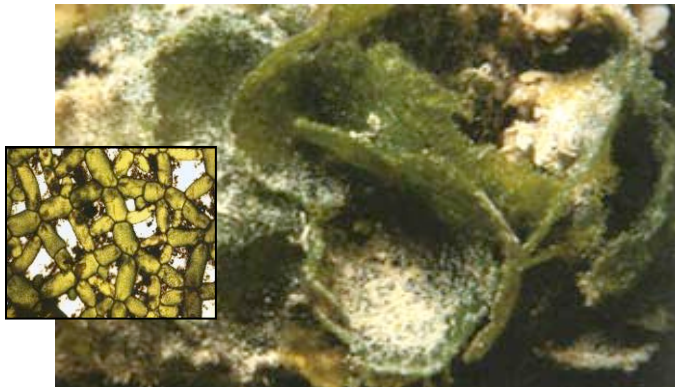
***Caulerpa* spp.** – “stalks” attached by “root”,  
shape of “stalks” varies



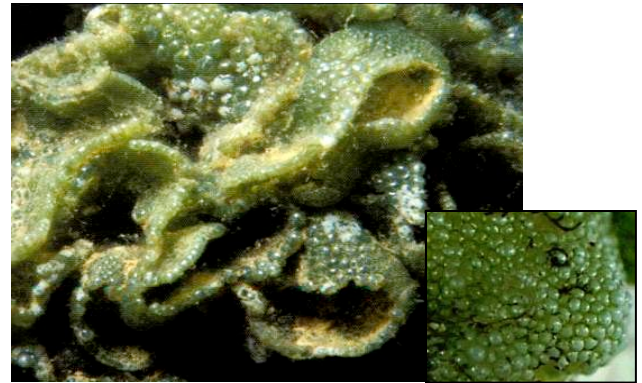
***Codium* spp.- fuzzy and squishy**



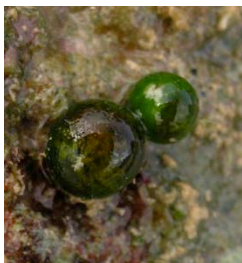
***C. edule*** – branches clumped    ***C. reediae*** – branches upright    ***C. arabicum*** – flat bumpy mat



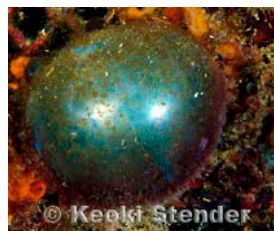
***Microdictyon setchellianum*** – upright  
fan, thin and crunchy, net-like close-up



***Dictyosphaeria cavernosa***  
crunchy, bubble-like close-up, hollow



***Bornetella sphaerica***  
pea to marble sized, not shiny



***Ventricaria ventricosa***  
shiny, circular



***Valonia* spp.**  
shiny, branched





***Acanthophora spicifera***  
flexible and spiky



***Laurencia spp.*** – rounded tips, (NOT spiky)



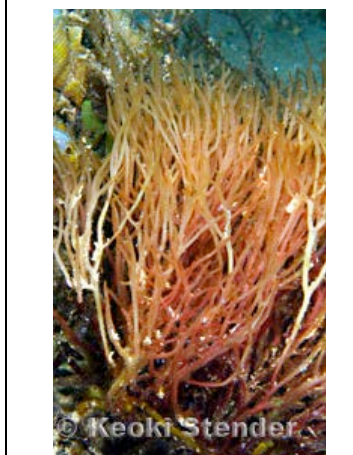
***Chondrophyucus parvipapillatus***  
flattened, wart-like knobs on edges



***Laurencia mcdermidiae*** – only bright green  
Laurencia



***Kappaphycus/Euchema spp.***  
stiff, shiny, warts, mat (windward Oahu)



***Gracilaria coronopifolia***  
cylindrical, stiff, Y-branching, DO NOT PICK



***Liagora/Galaxaura spp.***  
Calcified pink, smooth or hairy  
hard or slimy



***Gracilaria salicornia*** – NO  
spikes or warts, notice constrictions



***Ahnfeltiopsis* spp.**

Y-branching, stiff elastic



***A. cocinna*** – dark brown to bright yellow, round axes

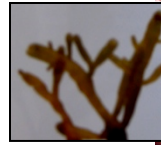


***A. flabelliformis*** – flattened fan

***Pterocliadiella* spp.** – stiff elastic

***P. caerulescens***

dark red to yellow green, flat irregular branches



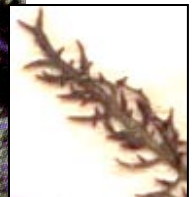
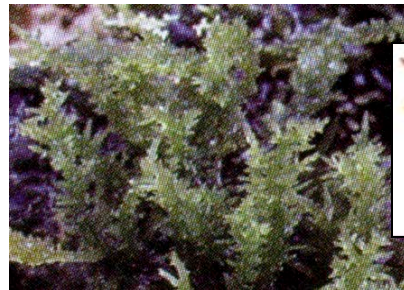
***P. capillacea*** – dark red, thin flat pyramid branches



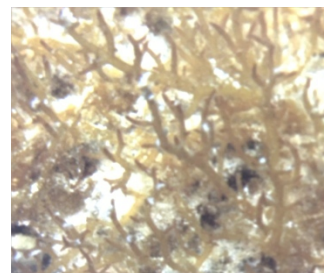
***Hypnea* spp.** – elastic



***H. musciformis*** – has hooks



***H. chordacea*** – main upright branches covered by soft, narrow side branches



***H. cervicornis*** – tangled clump, antler-like branches

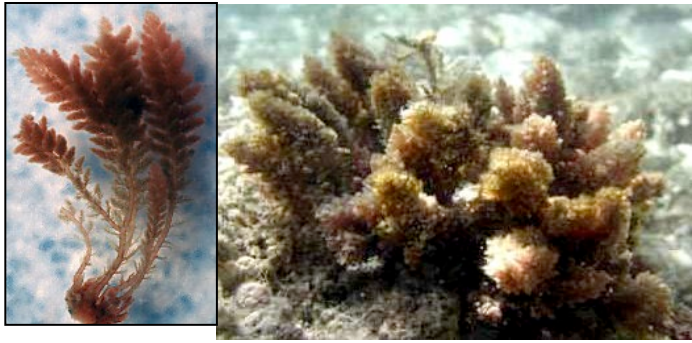


***Gelidiella acerosa*** – pyramid branching, small and stiff, cylindrical axes



***Gelidium pusillum*** – firm, rigid mats, flat upright branches





***Asparagopsis taxiformis*** – soft and fuzzy, each branch cone-like



***Wrangelia elegantissima*** – soft and fuzzy, each branch triangular

***Grateloupia spp.*** – elastic, smooth edges, slippery



***G. phuquocensis*** – branches vary in length/width



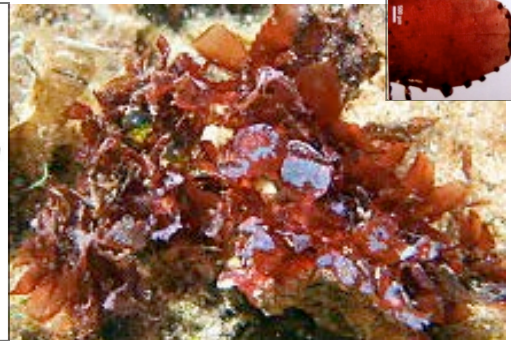
***G. hawaiiiana*** – more uniform branching



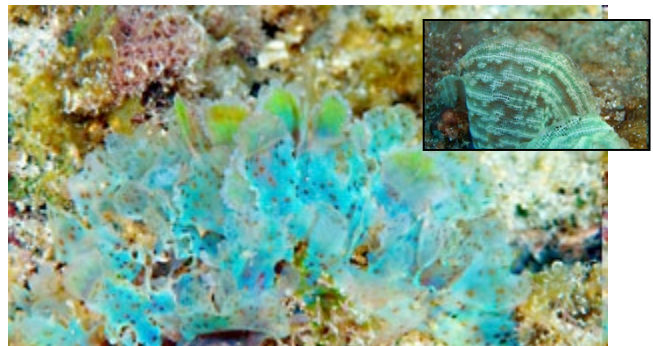
***G. filicina***



***Botrycladia skotsbergii***  
red bubble



***Amansia glomerata*** – toothed edges, rosette clumps, flat dark red blades



***Martensia spp.*** – soft, delicate, shimmers green or blue underwater, net-like





**Lyngbya majuscula**  
course, frizzy, hair-like,  
blackish



**Symploca hydroides**  
firm clusters filaments



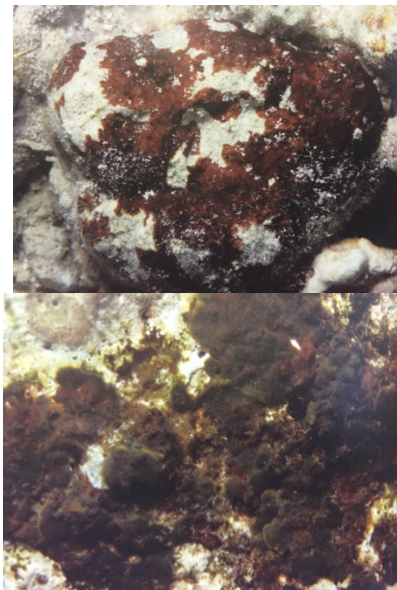
**Leptolyngbya crosbyana**  
solid lumps, white inside



**Halophila spp.** – grass, paddle-like



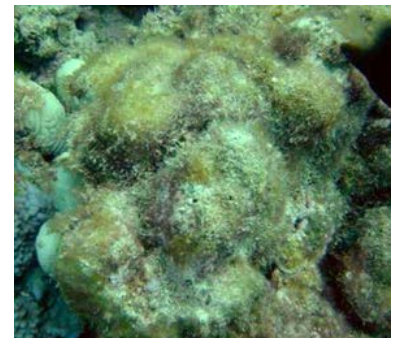
**Sponge** color varies



**Brown-colored crust**  
encrusting algae



**Crustose coralline algae (CCA)**  
pinkish rock



**Turf Algae**  
small & fuzzy

**Intertidal Photo ID Cards Not for Distribution. Photo Credits:**

Keoki & Yuko Stender ([www.marinelifephotography.com](http://www.marinelifephotography.com))

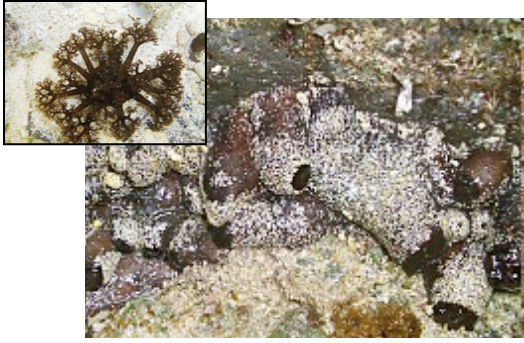
John M. Huisman, Isabella A. Abbott, Celia M. Smith (2007) Hawaiian Reef Plants

John Hoover (2002) Hawai'i's Sea Creatures

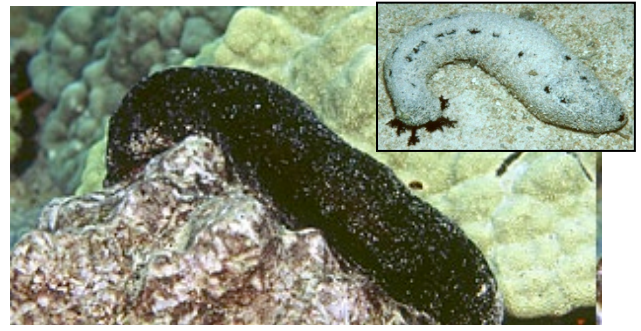
John Randall (1996) Shore Fishes of Hawai'i

Joanna Philippoff, T. Erin Cox, Kelly Boyle, Jake Gross, Larry Basch





***Holothuria cinerascens*** – often in clusters, under rocks, purple/black, sandy



***Holothuria atra*** – round, black but coated with sand



***Actinopyga mauritiana*** – solid to touch



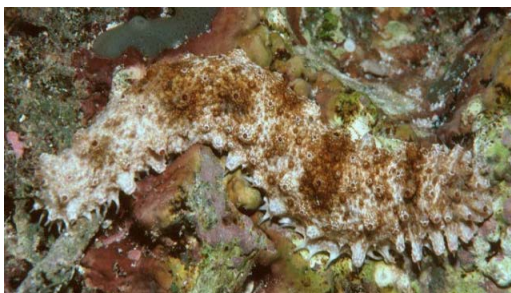
***Actinopyga obesa*** – orange or brown, tiny tips, can be sandy



***Holothuria impatiens***  
cone tips, firm, can be lightly spotted



***Holothuria difficilis*** – reddish-brown dark tips, soft



***Holothuria pervicax***  
textured but soft, blunt black tips



***Holothuria hilla*** – thin & flexible, soft



**Fireworm** – bristles **DO NOT TOUCH**



***Loimia medusa*** – blue-white strings





***Echinometra mathaei***



***Echinometra oblonga*** ***Colobocentrotus atratus***



***Tripneustes gratilla***



***Echinothrix calamaris***  
spines can be all black



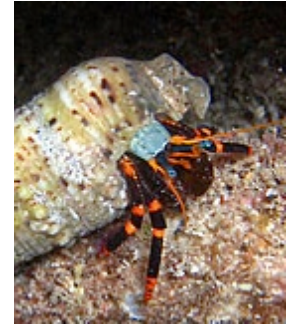
***Calcinus seurati***  
blue eyes, banded legs



***Grapsus tenuicrustatus***  
similar = Grapsidae family



***Pilodius aerolatus***  
similar = Xanthidae family



***Calcinus pictus*** – blue eyes, banded orange black legs



***Calappa gallus***  
lumpy rock



***Ophiocoma erinaceus***



***Calcinus laevimanus***  
blue eyes, little leg banding, white claw

***Simocareinus simplex***



***Calcinus latens***  
Black eyes, greenish, some banding on legs





**Nerita picea**  
all black



**Nerita polita** molted



**Littorina pintado**



**Echinolittorina hawaiiensis**



**Peasiella tantilla**  
spiral



**Isognomon perna**  
white bivalve



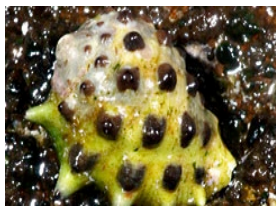
**Isognomon californicum**  
black and white bivalve



**Brachiodontes crebristriatus**  
sand, black bivalve



**Nesochathamalus Intertextus**  
purple barnacles



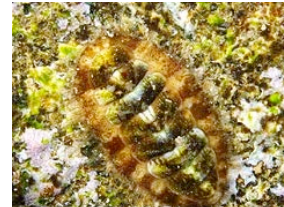
**Drupa ricina**  
green foot



**Trochus intextus**



**Turbo sandwicensis**



**Acanthochiton viridis**  
chiton, note hair, narrow  
**Ischnochiton petaloides**  
not pictured, wider  
colorful, no hair



**Serpularbis spp.**  
spiral tube



**Drupa morum**  
purple opening



**Monetaria caputserpentis**  
lighter brown, lines on edge



**Morula uva**  
white with black bumps

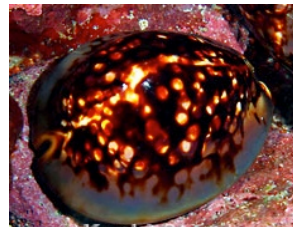
**Conus spp.**  
cone-shaped  
Can sting  
**DO NOT TOUCH**



**C. ebraeus**



**Smaragdina calyculata**  
black, round, slimy edges



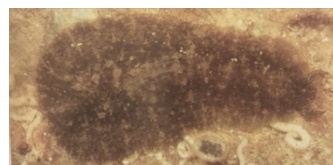
**Mauritia mauritiana**  
darker, humped, no lines



**Morula granulata**  
dark with dark bumps



**Onchidium verruculatum**  
black & warty



**Dolabrifera dolabrifera**



**Stylocheilus striatus**



**Dendropoma gregaria**  
Looks like black dots



'Opihi *Cellana* spp. (left to right → high to low on shore)



***Siphonaria normalis***  
 (false 'opihi) ribs wider than gaps, irregular edge, troughs black



***C. exarata***  
 many dark ribs, troughs light, relatively smooth edge



***C. sandwicensis***  
 ribs extend beyond shell edge = rough edge, less ridges, "peaky" shell



***C. talcosa***  
 domed shell, fine ribs, smooth edge



***Pocillopora damicornis***



***Pocillopora meandrina***



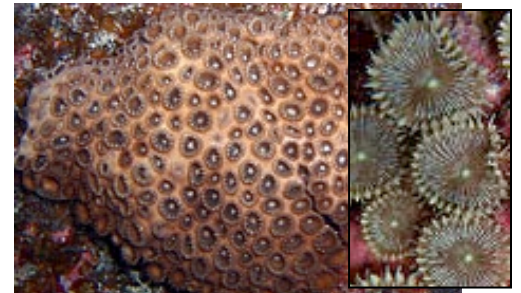
***Montipora* spp.**



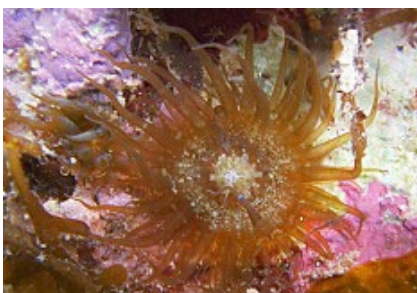
***Porites* spp.**



***Anthelia edmondsoni***



**Zooanthids**



***Aiptasia pulchella***  
 clear to tan

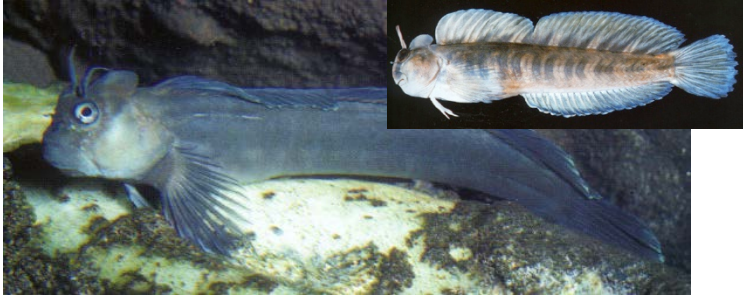


***Anthopleura nigrescens***  
 exposed to air = dark sticky blobs



***Cladactella manni***





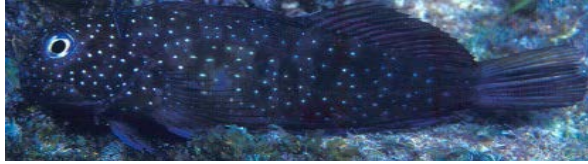
***Istiblennius zebra***



***Blenniella gibifrons***



***Cirripectes vanderbilti***



***Cirripectes* spp.**



***Exallia brevis***



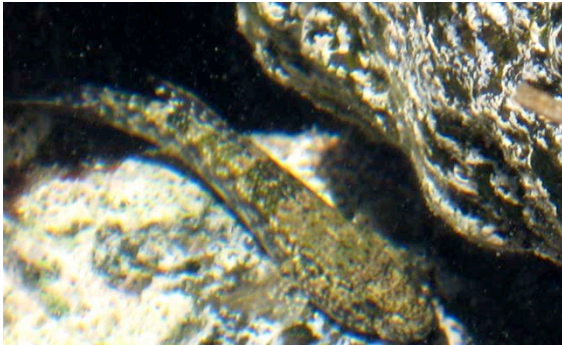
***Entomacrodus marmoratus***



***Entomacrodus strasburgi***



***Chaetodon lunula***



***Bathygobius* spp.**



***Kellogella oligolepis***



***Acanthurus triostegus***



***Stegastes marginatus***



***Thalassoma* spp.**



***Abudefduf sordidus***



***Kuhlia sandvicensis*** – lines on head

***Kuhlia xenura***-no lines



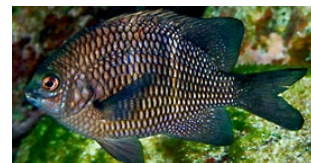
***Abudefduf abdominalis***



***Neomyxus leuciscus***-sharpnose, yellow spot

***Mugil cephalus***

***Plectroglyphidodon imparipennis***



***Plectroglyphidodon sindonis***





**Ipomoea spp.** (Beach Morning Glory)  
heart shaped, waxy, folded leaves,  
creeping "stem", on sand



**Sida fallax**  
(Ilima) leaves dull heart-oval shape, points  
along edge, woody stem, creeping habit



**Vigna marina**  
(Beach Pea) creeping habit, oval leaf



**Scaevola taccada** (Naupaka)  
bright green leaves, half flowers, shrub habit



**Prosopis pallida** (Kiawe) knarled  
tree with long spines on branch



**Chamaesyce spp.**  
leaves inside leaves, creeping-bush



**Gossypium tomentosum**  
Lobed leaf, flower hibiscus like



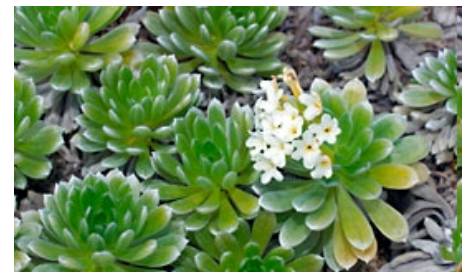
**Myoporum sandwicense**  
tree with long pointy leaves in pom-  
pom shape at end of branch



**Laucaena leucocephala**  
(Haole koa) cotton ball flowers, leaflets  
bean pods



**Hibiscus tiliaceus**  
heart shaped leaf, hibiscus



**Heliotropium spp.**  
leaves thick and cabbage shape,  
small clusters of flowers



**Sesbania spp.**  
leaflets at tip of branches in star pattern, bush-tree habit



**Sesuvium portulacastrum**  
succulent oval leaves, creeping



**Tournefortia argentea**  
(Heliotrope) waxy round leaves,  
cabbage at tips of branches, tree